

U.S. DISTRICT COURT
NORTHERN DISTRICT OF TEXAS

FILED

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CLERK, U.S. DISTRICT COURT

By

Deputy *K.2* 5:00 p.m.UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF TEXAS
DALLAS DIVISIONGENERAL ELECTRIC COMPANY,
Plaintiff,

v.

MITSUBISHI HEAVY INDUSTRIES,
LTD. ET AL.,
Defendants.§
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CIV. ACTION NO. 3:10-CV-276-F

COURT'S CHARGE TO THE JURY

1. INSTRUCTIONS AT THE CLOSE OF EVIDENCE

You have heard the evidence in this case. I will now instruct you on the law that you must apply. It is your duty to follow the law as I give it to you. On the other hand, you the jury are the judges of the facts. Do not consider any statement that I have made in the course of trial or make in these instructions as an indication that I have any opinion about the facts of this case.

After I instruct you on the law, the attorneys will have an opportunity to make their closing arguments. Statements and arguments of the attorneys are not evidence and are not instructions on the law. They are only intended to assist the jury in understanding the evidence and the parties' contentions.

I am about to give you the law that you must apply. If anything the lawyers have said is inconsistent with the law I am about to give you, you should disregard it and follow my instructions instead.

In arriving at your verdict, it is your duty to follow the rules of law which I give to you and find the facts of this case from the evidence introduced at trial and in accordance

with these rules of law. You are not to single out one instruction alone as stating the law, but must consider the instructions as a whole. Neither are you to be concerned with the wisdom of any rule of law stated by me.

The evidence in this case consists of the sworn testimony of the witnesses, regardless of who may have called them and whether they testify live or by deposition; all exhibits received in evidence, regardless of who may have produced them; and all facts that may have been admitted or stipulated.

You should not consider or be influenced by the fact that during the trial of this case, the attorneys have made objections to the testimony, as it is their duty to do, and it is my duty to rule on those objections in accordance with the law. Nothing in these instructions nor anything said or done by me during trial is, or was, made for the purpose of suggesting to you what verdict I think you should find.

Remember at all times that you are the sole and exclusive judges of the facts. As I have said, I will give you the law that you must apply to the facts of the case, but you—and only you—must determine what the facts are. Your judgment of the facts should be your own unbiased judgment, uninfluenced by the Court, except with respect to the law of the case as the Court instructs you. It will always be your recollection which will be binding. Counsel may say in their argument that something is a fact. If that is not your recollection, disregard counsel's statement.

It is the function of the jury to determine the credibility of each witness and to determine the weight to be given the witness's testimony. Consider all of the circumstances under which the witness testified, the interest, if any, the witness has in the

outcome of this case, the witness's appearance and demeanor while on the witness stand, the witness's apparent candor and fairness, or lack thereof, the reasonableness or unreasonableness of the witness's testimony, and the extent to which the witness is contradicted or supported by other credible evidence.

In determining the weight to give to the testimony of a witness, you should ask yourself whether there was evidence tending to prove that the witness testified falsely concerning some important fact, or whether there was evidence that at some other time the witness said or did something, or failed to say or do something, that was different from the testimony the witness gave before you during the trial.

You should keep in mind, of course, that a simple mistake by a witness does not necessarily mean that the witness was not telling the truth as he or she remembers it, because people may forget some things or remember other things inaccurately. So, if a witness has made a misstatement, you need to consider whether that misstatement was an intentional falsehood or simply an innocent lapse of memory; and the significance of that may depend on whether it has to do with an important fact or with only an unimportant detail.

The testimony of a single witness may be sufficient to prove any fact, even if a greater number of witnesses may have testified to the contrary, if after considering all the other evidence you believe that single witness.

When knowledge of technical subject matters may be helpful to the jury, a person who has special training or experience in that technical field—she or he is called an expert witness—is permitted to state his or her opinion on those technical matters.

However, you are not required to accept that opinion. As with any other witness, it is up to you to decide whether to rely upon it. The witnesses with such special training or experience in this case were: Dr. Mack Grady and Julie Davis on behalf of GE, and Dr. Mark Ehsani and Todd Schottlekotte on behalf of Mitsubishi.

In deciding whether to accept or rely upon the opinion of an expert witness, you may consider any bias of the witness, including any bias you may infer from evidence that the expert witness has been or will be paid for reviewing the case and testifying, or from evidence that he testifies regularly as an expert witness and his income from such testimony represents a significant portion of his income.

You are not to consider as evidence any testimony or document to which the Court sustained objections and ruled inadmissible.

While you should consider only the evidence in this case, you are permitted to draw such reasonable inferences from the testimony and exhibits as you feel are justified in the light of common experience. In other words, you may make deductions and reach conclusions that reason and common sense lead you to draw from the facts that have been established by the testimony and evidence in the case.

I will now briefly review the contentions of the parties and then give you some additional instructions and definitions that will guide you in deciding the issues or facts that you must resolve in this case.

1.1 AGREED FACTS

The parties have agreed (stipulated) to certain facts. You must accept the following stipulated facts as true:

1. General Electric Company ("GE") is a New York corporation with its principal place of business in Fairfield, Connecticut. GE engages in the development, manufacture, and distribution of variable speed wind turbines and components.
2. Mitsubishi Heavy Industries, Ltd. ("MHI") is a Japanese corporation with its principal place of business in Tokyo, Japan. MHI engages in the development and manufacture of components of variable speed wind turbines.
3. Mitsubishi Power Systems Americas, Inc. ("MPSA") is a subsidiary of Mitsubishi Heavy Industries America, Inc., a wholly owned subsidiary of MHI, and is organized and existing under the laws of the state of Delaware with its principal place of business located in Lake Mary, Florida. MPSA engages in the importation of components of variable speed wind turbines.
4. United States Patent No. 7,629,705 ("the '705 Patent"), entitled "METHOD AND APPARATUS FOR OPERATING ELECTRICAL MACHINES" was issued by the United States Patent and Trademark Office on December 8, 2009.
5. The '705 patent was filed in the United States on October 20, 2006, as Application No. 11/551,430 (the "'430 application").
6. International Patent Application Publication No. WO 2004/070936 to Nielsen ("Nielsen") was published on August 19, 2004.

1.2 CONTENTIONS OF THE PARTIES

GE contends that Mitsubishi makes, uses, offers to sell, sells or imports a method that infringes claim 1 of the '705 patent.

Mitsubishi denies that it is infringing claim 1 of the '705 patent. Mitsubishi also contends that claim 1 of the '705 patent is invalid. Mitsubishi contends that the claimed invention was ready for patenting more than one year before GE filed its patent application, that prior art references teach the invention set forth in claim 1, and that the

full scope of claim 1 is not enabled by or adequately described by the specification of the '705 patent.

GE denies that claim 1 of the '705 patent is invalid for any of the reasons stated by Mitsubishi.

Invalidity is a defense to infringement. Therefore, even though the PTO examiner has allowed the claims of the '705 patent, you, the jury, must decide whether claim 1 of the '705 patent is invalid.

Your job is to decide whether the asserted claim of the '705 patent has been infringed and whether the asserted claim of the '705 patent is invalid. If you decide that any claim of the patent has been infringed and is not invalid, you will then need to decide any money damages to be awarded to GE as compensation for the infringement.

2. INFRINGEMENT

2.1 THE MEANING OF CLAIM TERMS

I have defined certain words and phrases in the patent claims. During your deliberations you must apply these meanings.

Words in Claim 1 of the '705 Patent	Meaning
configuring the electrical machine such that the electrical machine remains electrically connected to the electric power system during and subsequent to a voltage amplitude of the electric power system operating outside of a predetermined range for an undetermined period of time	setting up the electrical machine such that the electrical machine remains connected to the electric power system during and subsequent to the voltage amplitude operating outside of a defined range for an indeterminable or unknowable period of time
configuring the electrical machine and the control system such that the electrical machine remains electrically connected to the electric power system during and subsequent to the voltage amplitude of the electric power system decreasing below the predetermined range including approximately zero volts for the undetermined period of time, thereby facilitating zero voltage ride through (ZVRT).	setting up the electrical machine and the control system such that the machine remains electrically connected to the electric power system during and subsequent to the voltage amplitude of the electric power system decreasing below the defined range, including approximately zero volts, for an indeterminable or unknowable period of time, thereby facilitating zero voltage ride through (ZVRT).

2.2 OPEN-ENDED OR “COMPRISING” CLAIMS

The beginning, or preamble, of claim 1 of the '705 patent uses the word “comprising.” “Comprising” means “including” or “containing but not limited to.” That is, if you decide that Mitsubishi’s method includes all the steps in claim 1 of the '705 patent, the claim is infringed. This is true even if the accused method includes steps in addition to those requirements.

For example, a claim to a table *comprising* a tabletop, legs, and glue would be infringed by a table that includes a tabletop, legs, and glue, even if the table also includes wheels on the table’s legs.

2.3 DIRECT INFRINGEMENT—GENERALLY

I will now instruct you on the specific rules you must follow to determine whether GE has proven that Mitsubishi has infringed one or more of the patent claims involved in this case.

2.4 DIRECT INFRINGEMENT—LITERAL INFRINGEMENT

GE alleges that Mitsubishi literally infringes claim 1 of the '705 patent. You must decide whether Mitsubishi has made, used, sold, or offered for sale within the United States, a method covered by claim 1 of the '705 patent. For purposes of your infringement analysis, the question before you is whether GE has proven that the act of commissioning infringes. You must compare each claim to Mitsubishi's method to determine whether every requirement of that claim is included in the accused method. A "PLL State Machine" is not required to infringe claim 1.

To prove literal infringement of claim 1 of the '705 patent, GE must prove that it is more probable than not that Mitsubishi's method includes every step in GE's patent claim, and every step was performed in the United States after the '705 patent issued. If Mitsubishi's method omits any step recited in GE's patent claim, Mitsubishi does not infringe that claim.

For literal infringement, GE is not required to prove that Mitsubishi intended to infringe or knew of the patent.

3. INVALIDITY

3.1 INVALIDITY—GENERALLY

Patent invalidity is a defense to patent infringement. Even though the PTO examiner has allowed the claims of a patent, you have the ultimate responsibility for deciding whether the claims of the patent are valid.

I will now instruct you on the invalidity issues you should consider. As you consider these issues, remember that Mitsubishi bears the burden of proving that it is highly probable that the claims are invalid. "Highly probable" is a higher standard of proof than "more probable than not."

In reaching your conclusions regarding validity, you may consider that not all evidence presented during the trial was known to the patent examiner before granting the claims of the asserted patent. You may also evaluate whether any evidence presented to you but not to the patent examiner is materially new, and, if so, consider that fact when determining whether Mitsubishi has proved that it is highly probable that the claim is invalid.

3.2 WRITTEN DESCRIPTION

Mitsubishi contends that claim 1 of the '705 patent is invalid for failure of the patent to provide an adequate written description of the claimed invention. Mitsubishi must prove that it is highly probable these claims lacked an adequate written description.

The written description requirement is satisfied if a person of ordinary skill in the field, reading the patent application as originally filed, would recognize that the patent application described the invention of these claims, even though the description might not use the exact words found in the claim. The written description is adequate if it shows

that the inventor was in possession of the invention at the time the application for the patent was filed, even though the claim may have been changed or new claims added during the prosecution of the application.

It is not necessary that each and every aspect of the claim be explicitly discussed, as long as a person of ordinary skill would understand that any aspect not expressly discussed is implicit in the patent application as originally filed. If you find that the claim challenged by Mitsubishi lacked an adequate written description, you must find that claim invalid.

3.3 ENABLEMENT

Mitsubishi contends that claim 1 of the '705 patent is invalid because the patent does not disclose sufficient information to enable one skilled in the field of the invention, at the time the application was filed (or its effective filing date), to make and use the claimed invention. This requirement is known as the enablement requirement. If a patent claim is not enabled, it is invalid. Each claim must be analyzed for compliance with the enablement requirement. Mitsubishi must prove that it is highly probable that the claim was not enabled.

In considering whether a patent claim satisfies the enablement requirement, you must keep in mind that patents are written for persons of skill in the field of the invention. Thus, a patent need not expressly state information that skilled persons would be likely to know or could obtain.

Mitsubishi bears the burden of establishing lack of enablement by showing that it is highly probable that a person skilled in the art, upon reading the patent document,

would not be able to make the invention work without undue experimentation. The fact that some experimentation may be required for a skilled person to make or use the claimed invention does not mean that a patent's written description fails to meet the enablement requirement. Factors you may consider in determining whether making the invention would require undue experimentation include:

1. the quantity of experimentation necessary;
2. the amount of direction or guidance disclosed in the patent;
3. the presence or absence of working examples in the patent;
4. the nature of the invention;
5. the state of the prior art;
6. the relative skill of those in the art;
7. the predictability of the art; and
8. the breadth of the claims.

If you find that one or more of these claims did not comply with the enablement requirement, you must find each such claim invalid.

3.4 ANTICIPATION

Mitsubishi may prove that claim 1 of the '705 patent is invalid by showing that it is highly probable that claim 1 of the '705 patent is anticipated by a single prior art reference. For purposes of this case, a reference is prior art if it is a patent or a printed publication dated before October 20, 2005. Mitsubishi relies on a single printed prior art reference—the Nielsen Patent Application. All of the claim requirements must have been

either (1) disclosed in a single prior art reference or (2) implicitly disclosed in a single prior art reference as viewed by one of ordinary skill in wind turbines.

The disclosure in a reference does not have to be in the same words as the claim, but all of the requirements of the claim must be described in enough detail, or necessarily implied by or inherent in the reference, to enable someone of ordinary skill in the field of the invention looking at the reference to make and use at least one embodiment of the claimed invention.

A prior art reference also invalidates a patent claim when the claimed invention necessarily results from practice of the subject of the prior art reference, even if the result was unrecognized and unappreciated by one of ordinary skill in the field of the invention.

Mitsubishi may also prove that claim 1 of the '705 patent is invalid by showing that it is highly probable that the claimed invention was ready for patenting more than one year before GE filed its patent application, that is, before October 20, 2005. The claimed invention is ready for patenting if it was actually built, or if the concept for the invention was complete; that is, the inventor had prepared drawings or other descriptions of the claimed invention that were sufficiently detailed to enable a person of ordinary skill in the field of the invention to make and use the invention based on them.

3.5 LEVEL OF ORDINARY SKILL

Several times in my instructions I have referred to a person of ordinary skill in the field of the invention. It is up to you to decide the level of ordinary skill in the field of the

invention. You should consider all of the evidence introduced at trial in making this decision, including:

1. the levels of education and experience of persons working in the field;
2. the types of problems encountered in the field; and
3. the sophistication of the technology.

GE contends that the level of ordinary skill in the field of the invention of the '705 patent was a bachelor's degree in Electrical Engineering with coursework completed (or equivalent experience) in electric power systems, electrical machines, power electronics, and renewable energy. In addition, the person of ordinary skill would also have two years of experience working with power electronics and/or electrical machines.

Mitsubishi contends that the level of ordinary skill in the field of the '705 patent was a bachelors degree in electrical engineering, along with at least 3-5 years of work experience or post-graduate study relating to the design and operation of electrical machines and their associated control systems.

4. DAMAGES

4.1 DAMAGES—GENERALLY

I will now instruct you on damages. If you find that Mitsubishi has infringed claim 1 of the '705 patent you must determine the amount of money damages to which GE is entitled. By instructing you on damages, I do not suggest that one or the other party should prevail. These instructions are provided to guide you on the calculation of

damages in the event you find infringement of a valid patent claim and thus must address the damages issue.

The amount of damages must be adequate to compensate GE for the infringement, but it may not be less than a “reasonable royalty.” At the same time, your damages determination must not include additional sums to punish Mitsubishi or to set an example. You may award compensatory damages only for the loss that GE proves was more likely than not caused by Mitsubishi’s infringement.

4.2 DAMAGES—BURDEN OF PROOF

Where the parties dispute a matter concerning damages, it is GE’s burden to prove that it is more probable than not that GE’s version is correct. GE must prove the amount of damages with reasonable certainty, but need not prove the amount of damages with mathematical precision. However, GE is not entitled to damages that are remote or speculative.

4.3 DAMAGES—LOST PROFITS

In this case, GE seeks to recover lost profits resulting from some, but not all, instances in which GE alleges Mitsubishi has infringed the ’705 patent. To recover lost profits damages, GE must show a reasonable probability that, “but for” the infringement, it would have made the sales that were made by Mitsubishi. One way GE may prove entitlement to lost profits is by establishing that:

1. there was demand for the patented method;

2. there were no acceptable noninfringing alternatives, or, if there were, that GE lost some sales as a result of the infringing activity;
3. GE had the manufacturing and marketing capacity to make any infringing sales actually made by Mitsubishi; and
4. the amount of profit GE would have made if Mitsubishi had not infringed.

GE may rely on evidence from both before and after December 8, 2009, in establishing that it is entitled to lost profits. However, GE can only recover lost profits for infringing activity that occurred on or after December 8, 2009.

For those infringing sales where GE does not seek, or does not prove, lost profits damages, the law requires that you award GE a reasonable royalty. I will now instruct you on how to calculate reasonable royalty damages.

4.4 REASONABLE ROYALTY—ENTITLEMENT

GE should be awarded a reasonable royalty for all infringing sales for which it has not been awarded lost profits damages.

4.5 REASONABLE ROYALTY—DEFINITION

A royalty is a payment made to a patent holder in exchange for rights to make, use or sell the claimed invention. A reasonable royalty is the payment that would have resulted from a negotiation between a patent holder and the infringer taking place just before the time when the infringing sales first began. In considering the nature of this negotiation, the focus is on what the expectations of the patent holder and infringer would have been had they entered into an agreement at that time and acted reasonably in their negotiations. However, you must assume that both parties believed the patent was valid

and infringed. In addition, you must assume that patent holder and infringer were willing to enter into an agreement; your role is to determine what that agreement would have been. The test for damages is what royalty would have resulted from the hypothetical negotiation and not simply what either party would have preferred.

In determining the royalty that would have resulted from the hypothetical negotiation you may consider real world facts including the following to the extent they are helpful to you:

- Licenses or offers to license the patent at issue in this case
- Licenses involving comparable patents
- The licensing history of the parties
- Licensing practices in the relevant industry
- Whether the patent owner had an established policy of refusing to license the patent at issue.
- The relationship between the patent owner and alleged infringer, including whether or not they were competitors
- The significance of the patented technology in promoting sales of the alleged infringer's products and earning it profit
- Alternatives to the patented technology and advantages provided by the patented technology relative to the alternatives.
- The portion of the alleged infringer's profit that should be credited to the invention as distinguished from nonpatented features, improvements or contributions.
- Any other economic factor that a normally prudent businessperson would, under similar circumstances, take into consideration in negotiating the hypothetical license.

5. INSTRUCTIONS FOR DELIBERATIONS

It is your sworn duty as jurors to discuss the case with one another in an effort to reach agreement if you can do so. Each of you must decide the case for yourself, but only after full consideration of the evidence with the other members of the jury. While you are discussing the case, do not hesitate to re-examine your own opinion and change your mind if you become convinced that you are wrong. However, do not give up your honest beliefs solely because the others think differently, or merely to finish the case.

Remember that in a very real way you are the judges—judges of the facts. Your only interest is to seek the truth from the evidence in the case.

Any notes that you have taken during this trial are only aids to memory. If your memory should differ from your notes, then you should rely on your memory and not on the notes. The notes are not evidence. A juror who has not taken notes should rely on his or her independent recollection of the evidence and should not be unduly influenced by the notes of other jurors. Notes are not entitled to any greater weight than the recollection or impression of each juror about the testimony.

Answer each question from the facts as you find them. Do not decide who you think should win and then answer the questions accordingly. Your answers and your verdict must be unanimous.

When you retire to the jury room to deliberate, you may take this charge document that I have been referring to, exhibits which the Court has admitted into evidence, and the verdict form that you must answer.

Select your Foreperson and conduct your deliberations. If you recess during your

deliberations, please continue to follow all of the instructions that the Court has given you concerning your conduct during the trial. After you have reached your unanimous verdict, your Foreperson must fill in your answers to the written questions and sign and date the verdict form. Return this charge document, together with your written answers to the questions.

Unless I direct you otherwise, do not reveal your answers until such time as you are discharged. You must never disclose to anyone, not even to me, your numerical division on any question.

If you want to communicate with me at any time, please give a written message to the bailiff, who will bring it to me. I will then respond as promptly as possible either in writing or by meeting with you in the courtroom. I will always first show the attorneys your question and my response before I answer your question.

After you have reached a verdict, you are not required to talk with anyone about the case unless I order you to do so.

You may now retire to the jury room to conduct your deliberations.